

## **Lenticels**

- (i) In woody stems and mature roots, there are certain pores in the layer of bark.
- (ii) The lenticels allow air to pass through them.

### **Q4. What are alveolar ducts?**

**Ans.** In the lungs, the bronchioles end as fine tubules called the alveolar ducts.

### **Q5. Define Alveolus?**

**Ans.** Within the lungs, each alveolar duct opens into a cluster of pouches called alveoli. The alveoli form the respiratory surface in humans.

### **Q6. What is Asthma? Write its symptoms (Board 2014)**

**Ans.** Asthma is a form of allergy, in which there is inflammation of the bronchi, more mucous production and narrowing of the airways. In asthma patients the bronchi and bronchioles become sensitive to different allergens and patient feels difficulty in breathing. The major symptoms are:

- (i) Shortness of breath
- (ii) Wheezing
- (iii) Cough and chest tightness

### **Q7. Define breathing.**

**Ans.** The term breathing is used for the process through which animals take air in bodies to get oxygen from it and then give out the air for getting rid of carbon dioxide. It is only the mechanical or physical process for exchange of gases.

### **Q8. What are bronchioles.**

**Ans.** The bronchi continue dividing in the lungs until they make several fine tubes called bronchioles. The bronchioles progressively lose the cartilages as they become narrower.

### **Q9. What is bronchitis? (Board 2013-14)**

**Ans.** Bronchitis is an inflammation of the bronchi or bronchioles. It results in excessive secretion of mucous into the tubes leading to the swelling of tubular walls and narrowing of tubes. It is caused by viruses, bacteria or exposure to chemical irritants e.g. tobacco smoke.

### **Q10. Define bronchus.**

**Ans.** On entering the chest cavity, the trachea divides into two smaller tubes called bronchus. The bronchi also have cartilagenous plates in their walls.

### **Q11. Define diaphragm. (Board 2013-14)**

**Ans.** A thick muscular structure is present below the lungs is called diaphragm.

### **Q12. What is emphysema?**

**Ans.** Emphysema is the destruction of the wall of the alveoli. It results in larger sacs but with less surface area for gaseous exchange. As lung tissue breaks down, the lungs do not come back to their original shape after exhalation. So air cannot be pushed out and is trapped in the lungs.

### **Symptoms**

- (i) Shortness of breath
- (ii) Fatigue
- (iii) Recurrent respiratory infections
- (iv) Weight loss

### **Q13. What is exhalation? (Board 2013-14)**

**Ans.** It takes place in the following way:

#### **Relaxation of rib muscles and diaphragm**

After the gaseous exchange in the lungs, the impure air is expelled out in exhalation. The ribs come back to the original position, the diaphragm muscles also relax and it gets its raised dome

### **Effect of relaxation**

This reduces the space in the chest cavity and increases the pressure on lungs. The lungs contract and the air is expelled out of them.

### **Q14. What is gaseous exchange?**

**Ans.** Taking in oxygen and giving out of carbon dioxide is termed as gaseous exchange.

### **Q15. What is inhalation? (Board 2013-14)**

**Ans.** It takes place in the following way:

### **Contraction of Rib muscles and diaphragm**

During inhalation the rib muscles contract and ribs are raised. At the same time the dome – shaped diaphragm contracts and is lowered.

### **Effect of contraction**

These movements increase the area of the thoracic cavity, which reduces the pressure on lungs. As a result, the lungs expand and the air pressure within them also decreases. The air from outside rushes into the lungs to equalize the pressure on both sides.

### **Q16. Define Larynx.**

**Ans.** The larynx is a box made up of cartilage. It is present between pharynx and trachea. It is also called voice box.

### **Q17. Define lenticels.**

**Ans.** In woody stems and mature roots, there are certain pores in the layer of bark. The lenticels allow air to pass through them.

### **Q18. What is Nasal cavity?**

**Ans.** The nose encloses the nasal cavity. The nasal cavity is divided into two portions by a wall. Each portion is lined by fine hairs and mucous which filter the dust particles from the air. The mucous also moistens and warms the incoming air and keeps its temperature usually equal to that of the body.

### **Q19. Define Nostrils.**

**Ans.** Nasal cavity opens to the outside through the openings called the nostrils.

### **Q20. What is pneumonia?**

**Ans.** It is an infection of lungs.

### **Double Pneumonia**

If this infection affects both lungs it is called double pneumonia.

### **Cause**

The most common cause of pneumonia is bacterium *Streptococcus pneumoniae*. Some viral and fungal infections may also lead to pneumonia.

### **Q21. What is trachea?**

**Ans.** Larynx continues to the trachea, which is also called the windpipe. It is about 12 cm long tube which lies in front of the oesophagus. There are C-shaped cartilagenous rings in the wall of trachea. The cartilage keep the trachea from collapsing even when there is no air in it.

**Q22. Define vocal cord.**

**Ans.** Two pairs of fibrous bands called vocal cords are stretched across the larynx. The vocal cords vibrate when the air passes through them. This vibration produces sounds.

**Q23. Define epiglottis. Write its function.** (Board 2014)

**Ans.** In the air passageway of man, the glottis is guarded by a flap of tissue is called epiglottis. Epiglottis closes the opening of glottis while swallowing in order to prevent entry of any food particle into it.

**Q24. What are the symptoms of Bronchitis?** (Board 2014)

**Ans.** Symptoms of Bronchitis includes:

- (a) Cough
- (b) Mild wheezing
- (c) Fever
- (d) Chills
- (e) Shortness of breath (Especially when doing hard job)

**Q25. What is Larynx? Write its function.** (Board 2014)

**Ans. Definition**

The larynx is a box made of cartilage. It is also called the voice box. It is present between pharynx and trachea.

**Function**

Two pairs of fibrous bands called vocal cords are stretched across the larynx. When the air passes through them, the vocal cords vibrate. This vibration produces sounds. Movements of lips, cheeks, tongue and jaws produce specific sounds which results in speech. Speech is an ability of only humans.